

Collagen Quantitation Kit

Cat. No. Kit-0241 **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Description

Collagen is the one of the main components of extracellular matrix, and accounts for about 30% of the whole human protein. Recent studies, the production of collagen are reduced in aged skin, the degradation and the accumulation of collagen found in a particular disease, such as has been shown. Therefore, it has become important in accurately quantifying technology health maintenance and disease diagnosis collagen. Collagen contains approximately 30 % Glycine (Gly) of whole amino acid residues in each molecule, and constitutes a repeated amino acid sequence, -Gly-X-Y- in which Pro or Hyp frequently appears at the X or Y position. The proposed assay method takes an advantage of this unique sequence of collagen as well as the remarkable specificity of bacterial collagenase that cleaves all collagen types at the position of N-terminal side of the Gly residue. Therefore, abundant N-terminal Gly-containing peptides such as Gly-Pro-Hyp, Gly-Pro-Ala, Gly-Pro-Pro, and Gly-Pro-Z (Z is other amino acid or oligopeptide) are produced from one molecule of each collagen, and greatly amplified fluorescence signals from these products are obtained by the reaction with 3,4-Dihydroxyphenylacetic acid (3,4-DHPAA). This kit is a highly specific and sensitive method for the assay of whole collagen in biological samples using a fluorogenic reagent, 3,4-Dihydroxyphenylacetic acid (3,4-DHPAA). The 3, 4-DHPAA reagent can selectively detect N-terminal Gly-containing peptides.

Storage

4°C

Kit Components

1. Enzyme Reagent (Collagenase): 200 µL x 1; 2. Standard solution (500 µg/mL Collagen): 300 µL x 1; 3. Buffer A: 30 mL x 1; 4. Fluorescence Reagent (3,4-DHPAA):

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

500µL x 1;5. Buffer B: 15 µL x 1;6. NaIO₄ solution: 5 mL x 1

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